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Erdman Hall, Bryn Mawr College

Michael J. Lewis

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ERDMAN HALL
BRYN MAWR COLLEGE

FROM
LOUIS KAHN:
IN THE REALM
OF ARCHITECTURE

BY
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AND
DAVID G. DELONG
1991

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Louis Kahn’s Erdman Hall at Bryn Mawr College was among the first of his works to achieve an international reputation. The three diamonds of its plan, the most striking aspect of the design, were the culmination of a decade of experimentation with geometric forms and his musings over an even longer period about the character of private and public space. Erdman was nonetheless atypical. Unlike the more or less linear design histories of Kahn’s other buildings, Erdman’s development is the story of not one but two parallel schemes, pursued simultaneously but separately, which gradually converged in the built design.

Although Bryn Mawr College was an institutional client, Kahn dealt largely with one individual, Katharine Elizabeth McBride, who had been president of the college since 1942. McBride was a member of the Bryn Mawr class of 1925 and had served as dean of Radcliffe College before her return to Bryn Mawr. (1) She continued the tradition of strong-willed and energetic presidents established by M. Carey Thomas, who presided over the college for a half century after its opening in 1885. During the first seventeen years of McBride’s presidency there was little construction at the college, but by the late 1950s it had become clear that a new library and dormitory were needed. McBride was interested in marking her presidency at Bryn Mawr architecturally. For this there was a strong Bryn Mawr precedent: President Thomas had herself been a demanding architectural patron who, together with architects Walter Cope and John Stewardson, had largely created the Gothic campus of gray rubble walls and white limestone trim in which Kahn was to work. (2)

McBride came to Kahn circuitously. In early autumn 1959 she asked her friend Eleanor Marquand Delanoy, a member of the board of trustees, how she should go about finding an architect. Should there be a competition? Or should the college appoint an architect for all of its buildings? Delanoy, who lived in Princeton
and had ties to that university, wrote McBride on October 24 to say that it was Princeton’s policy to use different architects for different buildings. Her Princeton friends recommended such “world famous names” as Richard Neutra and Marcel Breuer. (3) She thought it might be tactful to use an out-of-town architect, but if a Philadelphian was needed, she recommended Kahn, “who is doing the Penn Science Building [the Richards Medical Research Building].” McBride was inclined toward Neutra at first and made arrangements to meet with him through Delanoy. But Neutra was old and very busy, and when his planned October visit to Princeton was postponed until April 1960, McBride turned elsewhere. (4) At this critical moment another friend of McBride’s seems to have spoken up for Kahn. Phyllis Goodhart Gordan, a trustee of the college and a member of the dormitory building committee, was also familiar with Kahn’s work. She was very close to Vanna Venturi, whose son Robert had worked with Kahn. (5) Apparently Venturi recommended Kahn to Goodhart, who in turn spoke with McBride; at any rate, when Kahn was approached by Bryn Mawr in early spring of 1960, he immediately sent a thank-you note to Vanna Venturi. (6)

The approach to Kahn was tentative. Bryn Mawr’s endowment was precariously small and there were no certain donors for such a building. McBride was surely counting on her friend Eleanor Donnelley Erdman, a college trustee, who had planned to leave the college over one million dollars. But when Erdman died in early January 1960, her will was not completed. (7) Nonetheless, Kahn indicated his interest and McBride set about preparing a building program. This was completed on May 5, 1960, and sent to Kahn on May 24. (8)

The program specified a dormitory to house 130 students in “a variety of size and shape of rooms.” While the building was clearly to be modern, the intention was to retain some of the
amenities of Cope and Stewardson’s dormitories: the rooms were to have window seats and “concealed moldings for hanging photographs.” The “excessive amount of glass” of recent college architecture was also to be avoided. But above all, much attention in the program was paid to the character of dormitory living. Life at Bryn Mawr was strongly colored by its dormitory system, and each of the residences had a dining hall, social rooms, and a staff of live-in maids. The new dormitory was therefore intended to have its own dining hall as well as a “large reception room for teas,” several smaller reception rooms, and “one large ‘noisy’ smoking room with a fireplace.” (9)

Kahn attended the World Design Conference in Tokyo in May 1960, but at the end of the month he wrote McBride that he was back and planning to “begin the studies in a week or so.” (10) Only a few drawings, none of them dated and some of them preserved only in photographs, record these first probing studies. These are divided into two groups: schematic studies that laid out the required number of rooms graphically and more resolved sketch plans, which translated the parts of the program into interconnected rectangular figures. (11) In all of these the principal point of interest was the union of several large public spaces with the dormitory rooms themselves.

Bryn Mawr, still without money for the building, did not press Kahn. When Robert M. Cooke, the college’s insurance agent, visited Kahn’s office on August 26, he found the plans “not developed” and the architect could only assure him that the dormitory would have concrete floors and roofs and be fireproof. (12) Not until November, when McBride invited Kahn to present his proposals to the college, were scale drawings prepared. Kahn’s long-time collaborator Anne Tyng prepared the main scheme for the first meeting. In her choice of forms Tyng reproduced a motif familiar from the studies for the Trenton Jewish Community Center (1954-59). As at Trenton, her plan was based on the repetition of two
interlocking polygonal figures: a small square unit and a larger octagon, creating a modular structure that could be extended indefinitely. (13) This geometry suggested a solution for the dormitory rooms, each of which consisted of an octagon, while service facilities filled the adjacent squares. Tyng drew the octagonal rooms together into a six-lobed structure, forming a massive and ambitiously scaled composition. Because of its complex three-dimensional geometry, which was reminiscent of the recent DNA models developed in the research of James Watson and Francis Crick, McBride dubbed the scheme “the molecular plan.” (14)

Just in time for the November 25 presentation, Kahn prepared a second project, assisted by the young architect David Polk, a recent University of Pennsylvania graduate who had rejoined the office the week before, after having worked for Kahn in the mid-1950s. (15) This design featured a large rectangular volume into which two light courts were inserted, around which in turn were grouped simple rectangular dorm rooms. The plan was much less finished than Tyng’s scheme and much more diagrammatic in character. The blocklike arrangement of courts and rooms was close to the schematic studies. But Kahn seemed less interested in subordinating the parts of the building to a geometric module than in the spatial qualities of the building and its central courts. He rendered Polk’s elevations in colored pencil, being careful to show the treetops visible above and through the light courts. The preparation of such an alternative scheme, particularly one so hastily composed, was unusual for Kahn and perhaps suggests his dissatisfaction with Tyng’s project. By submitting his own scheme, he left himself an opening in which to work out other ideas.

Kahn was told to study the plans, and he left without a commitment on his part or McBride’s toward either design. (16) McBride had been satisfied with neither. The “octangular” or “molecular” scheme was an ingenious solution
for the individual dorm rooms, but its small-scale cellular structure made for awkward public spaces of any size. And the composition itself, with its sprawling lobes, suggested growth by accretion rather than formal planning. But if the Tyng project was chaotic in composition, the second project was perhaps too bland, little more than a rectangle into which two symmetrical light courts had been sunk.

The decision not to commit to either scheme but to pursue both was fateful for the course of the Erdman design. Throughout the rest of the design process, well into 1962, the office would work concurrently on both — not the way the office usually handled its work. Tyng would continue to refine her design in a more or less consistent line. Kahn, on the other hand, was much more restless, and his successive projects showed sudden changes and abrupt deviations from preceding plans. He tended to lavish his attention on the large spaces of the building, such as the lobby and dining hall, while Tyng devoted herself to the smaller rooms that established the module for the building. Privately Kahn disparaged the Tyng project, with its additive, cellular structure, calling it "algae." (17) Instead he persisted with his light court idea, shifting to section drawings rather than plans to deal with lighting and the spatial character of the courts. (18)

In early April 1961 the architects presented their revised plans to McBride. Tyng submitted the octangular project, whose composition was now much compressed, with the separated lobes of the earlier version drawn together into an extended rectangular volume. (19) McBride revealed that she was "more interested" in this scheme and slightly perplexed over Kahn's revised design, which was now "almost completely different." (20) But sensing "more support" among the committee for Kahn's scheme than for Tyng's, she again refused to endorse either.

McBride also declined to commit herself at the next presentation, on May 23, 1961, which was
attended by Kahn and two other architects—presumably Tyng and Polk. (21) Kahn was still struggling with the dialogue between the large public spaces and the smaller dormitory rooms, and he now suggested a solution that segregated the public spaces at the front of the building from the private spaces at the rear. To further underscore the difference between these two realms he created two different kinds of geometry. The dining hall and living room were given monumentally simple forms: a square and a circle, respectively, each inserted within a larger square. For the bedrooms he chose a more intricate geometry: in place of the simple rectangular units of his first submission, he adopted rooms of an irregular L-shape that Polk had suggested. (22)

Tyng for her part continued to discipline the geometry of her composition. (23) She had surrendered the idea of continuing the octagonal module throughout the building, and, like Kahn, she now established large, geometrically ordered spaces for the public functions. These formed three large squares, within which were inserted a square, tilted diamond-fashion, for the recreation area, a circle for the lobby, and another tilted square for the dining hall. Almost certainly this reflected the influence of Kahn. But whereas Kahn’s design placed these spaces along one flank of his building, Tyng placed them in the middle, wrapping the dorm rooms around the perimeter.

Here was suggested for the first time one of the most characteristic aspects of Erdman’s design: the enclosure of monumentally scaled public spaces within a mantle of smaller private spaces. McBride described the plans to Eleanor Delanoy, who had first recommended Kahn. She found the new design “promising,” with the “octangular plan . . . reshaped in a long rectangle which is made up of several quadrangles, the inside of each being used for public rooms.” (24) Although, she confessed, this design still needed “much more work,” she nonetheless preferred it to Kahn’s
design, which did "not seem as promising . . . to my eye. Mr. Kahn maintains his interest in his set, however, and I think may work on it further."

During the course of the summer and autumn of 1961 the firm worked on the project. Tyng continued to explore variants of the octagonal plan. (25) But while she worked consistently within her modular system, in October Kahn made another abrupt turn, discarding most of his May 1961 scheme. (26) From it he retained only Polk's L-shaped rooms, which he assembled into four towerlike blocks grouped around an open courtyard. The effect was close to that created by the detached tower masses of the Richards Building. Kahn clearly had accepted Tyng's idea of wrapping small spaces around large; the question remained how to translate this principle into a unified composition. (27) For this he still had no answer. He confessed his frustrations in a public lecture, titled "Law and Rule in Architecture," which he gave at Bryn Mawr on October 23. (28) Calling the Bryn Mawr dormitory one of the most difficult problems he had faced, Kahn said he was struggling to find "the qualities which make a school great." This, he told the students, was accomplished "through the use of space, architecture itself being a 'thoughtful making of spaces.'" But the peculiar problem at Bryn Mawr was "to distinguish each space, each room as a single entity, not just a series of partitions." Clearly he was still thinking of the design as the union of many discrete entities, the repeated modules of Tyng's octagons or Polk's L-shapes. About the formal unity or monumentality of the building as a whole there was no discussion.

An event then occurred that drastically accelerated the pace of work. The family of Eleanor Donnelley Erdman, who had died before making her promised gift to the college, announced that they would make a bequest in her memory. Since her son Donnelley was studying architecture at Princeton, where Kahn was then giving seminars, a gift to the building fund
seemed appropriate. Her husband, C. Pardee Erdman, wrote to Katharine McBride from Santa Barbara: “I am very much interested in the possibility of giving a building to Bryn Mawr in memory of Eleanor. Perhaps you do not need another building, and perhaps there is no room for one . . . but will you please give this a little thought.” (29) McBride fairly leapt at the offer. The only condition attached to the gift was that Donnelley might be able to attend the presentation meetings. In December 1961, Erdman made a $1 million bequest. (30)

With the building’s finances relatively secure, and with a projected opening date of September 1963, the office struggled to refine the two competing schemes. Kahn, Tyng, and Polk continued to make studies, assisted by David Rothstein, another recent addition to the office. During a frantic three days in mid-December the scheme of the building was finally established. Tyng made another revision to her octangular scheme on December 12 in which she abandoned her ideas of the previous May, where she had treated the building as a series of detached cubical masses, each one housing a principal public space. Now she drew her octangular rooms into a more or less monolithic mass, the rectangular volume relieved by clusters of rooms projecting from the main mass at regular intervals. (31) All along, the trajectory of Tyng’s work had been to unify the composition through the continuous geometry of its octangular module. Now, having introduced the theme of the central public spaces, she let the idea fall again. Two days later Kahn picked it up. (32) The result was the first plan with all of the familiar elements of Erdman as built: the three tilted squares (or diamonds) joined at the corners, the large public spaces in the center, and the alternation of interlocking rooms along the perimeter.

Here for the first time was a simple formula that resolved the many program requirements and created both a formal plan and a monumental exterior. When Kahn presented the plans to
McBride (no elevations had been prepared) he sketched a quick study of the main elevation to convey the idea of the exterior. The sketch showed the three blocks in strong sunlight, with strong diagonal shadows highlighting the volumes of the three squares in vivid relief. Plan and elevation were unified, each showing the same association of the twin motifs of the square and the diagonal. McBride, finally presented with a design that reconciled the ideas of Kahn and Tyng, gave it her endorsement.

With the basic scheme established, the principal design question remaining was the character of the internal public spaces. These were developed quickly as the project was refined between early January and early May 1962. (33) In the early proposals, which still maintained much of the octagonal module of Tyng's work, the bathrooms were housed in the joints between the three large tilted squares. By April 6, when the revised design was submitted to McBride, the bathrooms had been transferred to the corners of the central spaces.

This change in the arrangement of the bathrooms occurred in tandem with the development of the public spaces. At first these were little more than circles inserted within squares. The circles soon gave way to squares at the two ends of the building (January 26) and eventually in the middle (April 6). (34) As these spaces were refined, they took on a more public and monumental character, chiefly through the generous provision of natural light. In the drawings submitted on March 15, the central spaces were raised slightly to form a clerestory, light being admitted through narrow slit windows capped by lunettes. (35) By April 6 the clerestories were raised and a single light tower was also added at one of the corners of each square. (36) This indirect source of light, brought in through a vertical tower, was a theme in other work by Kahn at the time, such as the light towers of the Rochester church or the light hoods of the Esherick house. By the May 2
presentation, the clerestory had vanished and light was now channeled solely through towers at all four corners. (37) The arrangement of light towers was the last major plan issue to be resolved; on May 10, 1962, Kahn wrote to McBride that the design of Erdman was "essentially settled." The working drawings were to be completed by the end of July. (38)

In fact, they did not begin to be completed until March 25, 1963. (39) Their preparation went much more slowly than planned and there was resistance to some of Kahn's ideas among members of the college administration. This was particularly true with respect to materials. In a memorandum to McBride dated August 1, 1962, a campus committee criticized some aspects of the design. Above all, the committee wrote, "we opposed exposed concrete anywhere." (40) But McBride supported Kahn stalwartly. Still, compromises were made, especially on the exterior, which was ultimately clad with a revetment of Pennsylvania slate. (41)

Bids for the buildings were opened on March 29, 1963, and the contractors Nason & Cullen were notified of their successful bid on May 7. (42) Excavation began the following July and the reinforced concrete structure was poured in stages throughout the autumn of 1963 and into the spring and summer of 1964. The college accepted the building formally in May 1965. Toward the end, when Erdman was nearing completion, Kahn wrote proudly, "the building committee like my building very much . . . I had faith in it all the time." (43)

COVER PHOTO CAPTION:
During the 1960's Kahn often referred to the Scottish castle Comlogan in Dumphriesshire to clarify his concept of a central common area with a pronounced periphery of smaller rooms. At Bryn Mawr, Kahn's design, as with the First Unitarian Church, is strongly based on a central courtyard surrounded by rooms. Twelve large towers admit sunlight into the central space of the
three square constructions, which intrude into each other at two corners. Unlike the church in Rochester, the skylight glazing is oriented toward the outside, a configuration which allows, from the ground floor, a direct view of the sky. Since light is not diffracted in the light shafts at all times of day, an excessive sacred atmosphere cannot prevail. The inset facade creates the impression of a citadel. A kind of merlon closes off the vertically oriented top-floor windows. In the rooms extending beyond the inset facade, the window openings are installed laterally. When one enters one of these rooms, the view out is initially blocked by the wall installed on the central axis; the light niches to the left and right, however, make a correspondingly greater impression. The rooms one layer deeper in the building are illuminated by inset central windows. Rolling fabric shades installed inside the windows furnish protection from the sun. Surprisingly, the windows open only toward the outside, by a crank; when opened, they are exposed to the elements.

NOTES


11. The schematic room studies include drawings 565.2-11, Kahn Collection. The early idea sketches can be only approximately dated by comparing them with the dated drawings beginning in November 1960. The earliest of these probably include drawings 385.67 and 386.67 at the Museum of Modern Art, New York; and three drawings in the collection of Donnelley Erdman (nos. 1, 4, and 5).


13. Several early studies in Kahn’s hand for the interlocking octagonal scheme are known. Among these are two drawings in the collection of Donnelley Erdman (nos. 2 and 5) and a now lost drawing reproduced as fig. 3 in Lynn Scholz, “Architecture Alive on Campus: Erdman Hall,” Bryn Mawr Alumnae Bulletin 47 (Fall 1965): 2-9. Scholz reproduces a number of otherwise unknown studies for Erdman. These early studies do not provide clear indications of Kahn’s role in the development of the octagonal plan. They may represent variations on Tyng’s already well-defined geometric scheme.

14. Tyng, lecture in the Department of the History of Art, University of Pennsylvania, February 22, 1983; Tyng, interview with Michael J. Lewis, December 12, 1989. Tyng enjoyed a good rapport with McBride, who had been dean of Radcliffe College when Tyng was a student there.


16. There is indirect evidence of the meeting in a later letter from McBride to the building committee, May 25, 1961, 14A, McBride Papers. Also see memo to members of the building committee, November 11, 1960.

17. Polk, interview with Lewis.

19. Four undated plans in the Bryn Mawr College Archives are almost certainly the drawings from the April 1961 meeting: they show a composition that is transitional between those presented in the November 25, 1960, drawings and the May 23, 1961, set.

20. Letter, McBride to Delanoy, April 5, 1961, McBride Papers. Kahn’s submission at this presentation has not been located.


22. Both Polk and Tyng identify the May 23 submission as essentially Polk’s project; interviews with Lewis.

23. This scheme has been assigned to Tyng by both Polk and Tyng; ibid.


25. Perhaps as a diversion, Tyng revised her long-abandoned plan of November 1960, replacing two of its lobes with three interlocking diamonds to house the public spaces, drawings, June 21, 1961, Bryn Mawr College Archives.


27. This plan is reproduced and discussed in Alexandra Tyng, Beginning: Louis I. Kahn’s Philosophy of Architecture (New York: John Wiley & Sons, 1984), 44-46.


31. Tyng and Polk, interviews with Lewis.

32. Ibid. The earliest drawings for the three-diamond scheme are dated December 14, 1961, and provisionally catalogued as drawings B-61-71 and B-61-72, Bryn Mawr College Archives. The rendering of the foliage and the heavy overlay of explanatory pencil sketches both appear...
to be in Kahn's hand, suggesting that these are the
drawings with which the architect first presented the three-
diamond scheme to McBride.

33. Polk, interview with Lewis.

34. Submission sets of drawings (with pencil emendations) dated January 26 and April 6, 1962, Bryn Mawr College Archives. Duplicate submission sets of these (and the following drawings) are also preserved in the Kahn Collection.


36. Submission set of drawings dated April 6, 1962, Bryn Mawr College Archives.

37. Submission set of drawings dated May 2, 1962, Bryn Mawr College Archives.


39. Full sets of floor plans were not completed until May 21, 1963, while the section drawings and many construction details are dated January 10, 1964. Full sets of working drawings survive in the Kahn Collection and in the Bryn Mawr College Archives.


42. Bid documents, Erdman File, McBride Papers.


Cover photo courtesy of Louis I. Kahn Collection, University of Pennsylvania and Pennsylvania Historical and Museum Commission.